



SEQUENCE LISTING

<110> MARKOWITZ, Sanford D.
<120> METHODS FOR TREATING PATIENTS AND IDENTIFYING THERAPEUTICS
<130> CWRU-P01-044
<140> 10/650,112
<141> 2003-08-26
<150> 10/274,177
<151> 2002-10-18
<150> 10/229,245
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<151> 2002-08-27
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<170> PatentIn version 3.2
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Arg	Thr	Arg	His	Ile	Leu	Ile	Asp	Asn	Gly	Gly	Glu	Leu	His	Ala	Gly
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Ser	Ala	Leu	Cys	Pro	Phe	Gln	Gly	Asn	Phe	Thr	Ile	Ile	Leu	Tyr	Gly
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Arg	Ala	Asp	Glu	Gly	Ile	Gln	Pro	Asp	Pro	Tyr	Tyr	Gly	Leu	Lys	Tyr
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Ile	Gly	Val	Gly	Lys	Gly	Gly	Ala	Leu	Glu	Leu	His	Gly	Gln	Lys	Lys
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Leu	Ser	Trp	Thr	Phe	Leu	Asn	Lys	Thr	Leu	His	Pro	Gly	Gly	Met	Ala
	130						135				140				

Glu Gly Gly Tyr Phe Phe Glu Arg Ser Trp Gly His Arg Gly Val Ile
 145 150 155 160
 Val His Val Ile Asp Pro Lys Ser Gly Thr Val Ile His Ser Asp Arg
 165 170 175
 Phe Asp Thr Tyr Arg Ser Lys Lys Glu Ser Glu Arg Leu Val Gln Tyr
 180 185 190
 Leu Asn Ala Val Pro Asp Gly Arg Ile Leu Ser Val Ala Val Asn Asp
 195 200 205
 Glu Gly Ser Arg Asn Leu Asp Asp Met Ala Arg Lys Ala Met Thr Lys
 210 215 220
 Leu Gly Ser Lys His Phe Leu His Leu Gly Phe Arg His Pro Trp Ser
 225 230 235 240
 Phe Leu Thr Val Lys Gly Asn Pro Ser Ser Ser Val Glu Asp His Ile
 245 250 255
 Glu Tyr His Gly His Arg Gly Ser Ala Ala Ala Arg Val Phe Lys Leu
 260 265 270
 Phe Gln Thr Glu His Gly Glu Tyr Phe Asn Val Ser Leu Ser Ser Glu
 275 280 285
 Trp Val Gln Asp Val Glu Trp Thr Glu Trp Phe Asp His Asp Lys Val
 290 295 300
 Ser Gln Thr Lys Gly Gly Glu Lys Ile Ser Asp Leu Trp Lys Ala His
 305 310 315 320
 Pro Gly Lys Ile Cys Asn Arg Pro Ile Asp Ile Gln Ala Thr Thr Met
 325 330 335
 Asp Gly Val Asn Leu Ser Thr Glu Val Val Tyr Lys Lys Gly Gln Asp
 340 345 350
 Tyr Arg Phe Ala Cys Tyr Asp Arg Gly Arg Ala Cys Arg Ser Tyr Arg
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 Val Arg Phe Leu Cys Gly Lys Pro Val Arg Pro Lys Leu Thr Val Thr
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 Ile Asp Thr Asn Val Asn Ser Thr Ile Leu Asn Leu Glu Asp Asn Val
 385 390 395 400
 Gln Ser Trp Lys Pro Gly Asp Thr Leu Val Ile Ala Ser Thr Asp Tyr
 405 410 415
 Ser Met Tyr Gln Ala Glu Glu Phe Gln Val Leu Pro Cys Arg Ser Cys
 420 425 430
 Ala Pro Asn Gln Val Lys Val Ala Gly Lys Pro Met Tyr Leu His Ile
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 Gly Glu Glu Ile Asp Gly Val Asp Met Arg Ala Glu Val Gly Leu Leu

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Tyr	Arg	Asn	His	Ile	Cys	Asn	Phe	Phe	Asp	Phe	Asp	Thr	Phe	Gly	Gly
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Glu	Leu	Lys	His	Met	Gly	Gln	Gln	Leu	Val	Gly	Gln	Tyr	Pro	Ile	His
		515					520					525			
Phe	His	Leu	Ala	Gly	Asp	Val	Asp	Glu	Arg	Gly	Gly	Tyr	Asp	Pro	Pro
	530					535					540				
Thr	Tyr	Ile	Arg	Asp	Leu	Ser	Ile	His	His	Thr	Phe	Ser	Arg	Cys	Val
545					550					555					560
Thr	Val	His	Gly	Ser	Asn	Gly	Leu	Leu	Ile	Lys	Asp	Val	Val	Gly	Tyr
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Asn	Ser	Leu	Gly	His	Cys	Phe	Phe	Thr	Glu	Asp	Gly	Pro	Glu	Glu	Arg
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Asn	Thr	Phe	Asp	His	Cys	Leu	Gly	Leu	Leu	Val	Lys	Ser	Gly	Thr	Leu
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Ser	Tyr	Pro	Gly	Tyr	Ile	Pro	Lys	Pro	Arg	Gln	Asp	Cys	Asn	Ala	Val
625					630					635					640
Ser	Thr	Phe	Trp	Met	Ala	Asn	Pro	Asn	Asn	Asn	Leu	Ile	Asn	Cys	Ala
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Ala	Ala	Gly	Ser	Glu	Glu	Thr	Gly	Phe	Trp	Phe	Ile	Phe	His	His	Val
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Pro	Thr	Gly	Pro	Ser	Val	Gly	Met	Tyr	Ser	Pro	Gly	Tyr	Ser	Glu	His
		675					680					685			
Ile	Pro	Leu	Gly	Lys	Phe	Tyr	Asn	Asn	Arg	Ala	His	Ser	Asn	Tyr	Arg
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Ala	Gly	Met	Ile	Ile	Asp	Asn	Gly	Val	Lys	Thr	Thr	Glu	Ala	Ser	Ala
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Lys	Asp	Lys	Arg	Pro	Phe	Leu	Ser	Ile	Ile	Ser	Ala	Arg	Tyr	Ser	Pro
				725					730					735	
His	Gln	Asp	Ala	Asp	Pro	Leu	Lys	Pro	Arg	Glu	Pro	Ala	Ile	Ile	Arg
			740					745					750		
His	Phe	Ile	Ala	Tyr	Lys	Asn	Gln	Asp	His	Gly	Ala	Trp	Leu	Arg	Gly
		755					760					765			

Gly Asp Val Trp Leu Asp Ser Cys Arg Phe Ala Asp Asn Gly Ile Gly
 770 775 780
 Leu Thr Leu Ala Ser Gly Gly Thr Phe Pro Tyr Asp Asp Gly Ser Lys
 785 790 795 800
 Gln Glu Ile Lys Asn Ser Leu Phe Val Gly Glu Ser Gly Asn Val Gly
 805 810 815
 Thr Glu Met Met Asp Asn Arg Ile Trp Gly Pro Gly Gly Leu Asp His
 820 825 830
 Ser Gly Arg Thr Leu Pro Ile Gly Gln Asn Phe Pro Ile Arg Gly Ile
 835 840 845
 Gln Leu Tyr Asp Gly Pro Ile Asn Ile Gln Asn Cys Thr Phe Arg Lys
 850 855 860
 Phe Val Ala Leu Glu Gly Arg His Thr Ser Ala Leu Ala Phe Arg Leu
 865 870 875 880
 Asn Asn Ala Trp Gln Ser Cys Pro His Asn Asn Val Thr Gly Ile Ala
 885 890 895
 Phe Glu Asp Val Pro Ile Thr Ser Arg Val Phe Phe Gly Glu Pro Gly
 900 905 910
 Pro Trp Phe Asn Gln Leu Asp Met Asp Gly Asp Lys Thr Ser Val Phe
 915 920 925
 His Asp Val Asp Gly Ser Val Ser Glu Tyr Pro Gly Ser Tyr Leu Thr
 930 935 940
 Lys Asn Asp Asn Trp Leu Val Arg His Pro Asp Cys Ile Asn Val Pro
 945 950 955 960
 Asp Trp Arg Gly Ala Ile Cys Ser Gly Cys Tyr Ala Gln Met Tyr Ile
 965 970 975
 Gln Ala Tyr Lys Thr Ser Asn Leu Arg Met Lys Ile Ile Lys Asn Asp
 980 985 990
 Phe Pro Ser His Pro Leu Tyr Leu Glu Gly Ala Leu Thr Arg Ser Thr
 995 1000 1005
 His Tyr Gln Gln Tyr Gln Pro Val Val Thr Leu Gln Lys Gly Tyr
 1010 1015 1020
 Thr Ile His Trp Asp Gln Thr Ala Pro Ala Glu Leu Ala Ile Trp
 1025 1030 1035
 Leu Ile Asn Phe Asn Lys Gly Asp Trp Ile Arg Val Gly Leu Cys
 1040 1045 1050
 Tyr Pro Arg Gly Thr Thr Phe Ser Ile Leu Ser Asp Val His Asn
 1055 1060 1065
 Arg Leu Leu Lys Gln Thr Ser Lys Thr Gly Val Phe Val Arg Thr
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Leu	Gln	Met	Asp	Lys	Val	Glu	Gln	Ser	Tyr	Pro	Gly	Arg	Ser	His
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Tyr	Tyr	Trp	Asp	Glu	Asp	Ser	Gly	Leu	Leu	Phe	Leu	Lys	Leu	Lys
1100						1105					1110			
Ala	Gln	Asn	Glu	Arg	Glu	Lys	Phe	Ala	Phe	Cys	Ser	Met	Lys	Gly
1115						1120					1125			
Cys	Glu	Arg	Ile	Lys	Ile	Lys	Ala	Leu	Ile	Pro	Lys	Asn	Ala	Gly
1130						1135					1140			
Val	Ser	Asp	Cys	Thr	Ala	Thr	Ala	Tyr	Pro	Lys	Phe	Thr	Glu	Arg
1145						1150					1155			
Ala	Val	Val	Asp	Val	Pro	Met	Pro	Lys	Lys	Leu	Phe	Gly	Ser	Gln
1160						1165					1170			
Leu	Lys	Thr	Lys	Asp	His	Phe	Leu	Glu	Val	Lys	Met	Glu	Ser	Ser
1175						1180					1185			
Lys	Gln	His	Phe	Phe	His	Leu	Trp	Asn	Asp	Phe	Ala	Tyr	Ile	Glu
1190						1195					1200			
Val	Asp	Gly	Lys	Lys	Tyr	Pro	Ser	Ser	Glu	Asp	Gly	Ile	Gln	Val
1205						1210					1215			
Val	Val	Ile	Asp	Gly	Asn	Gln	Gly	Arg	Val	Val	Ser	His	Thr	Ser
1220						1225					1230			
Phe	Arg	Asn	Ser	Ile	Leu	Gln	Gly	Ile	Pro	Trp	Gln	Leu	Phe	Asn
1235						1240					1245			
Tyr	Val	Ala	Thr	Ile	Pro	Asp	Asn	Ser	Ile	Val	Leu	Met	Ala	Ser
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Lys	Gly	Arg	Tyr	Val	Ser	Arg	Gly	Pro	Trp	Thr	Arg	Val	Leu	Glu
1265						1270					1275			
Lys	Leu	Gly	Ala	Asp	Arg	Gly	Leu	Lys	Leu	Lys	Glu	Gln	Met	Ala
1280						1285					1290			
Phe	Val	Gly	Phe	Lys	Gly	Ser	Phe	Arg	Pro	Ile	Trp	Val	Thr	Leu
1295						1300					1305			
Asp	Thr	Glu	Asp	His	Lys	Ala	Lys	Ile	Phe	Gln	Val	Val	Pro	Ile
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Pro	Val	Val	Lys	Lys	Lys	Lys	Leu							
1325						1330								

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<211> 1328

<212> PRT

<213> Homo sapiens

<400> 2

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			20					25					30			
Leu	Thr	Ser	Ser	Ala	Thr	Val	Tyr	Ser	Ile	His	Ile	Ser	Glu	Gly	Gly	
		35					40					45				
Lys	Leu	Val	Ile	Lys	Asp	His	Asp	Glu	Pro	Ile	Val	Leu	Arg	Thr	Arg	
	50					55					60					
His	Ile	Leu	Ile	Asp	Asn	Gly	Gly	Glu	Leu	His	Ala	Gly	Ser	Ala	Leu	
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Cys	Pro	Phe	Gln	Gly	Asn	Phe	Thr	Ile	Ile	Leu	Tyr	Gly	Arg	Ala	Asp	
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Glu	Gly	Ile	Gln	Pro	Asp	Pro	Tyr	Tyr	Gly	Leu	Lys	Tyr	Ile	Gly	Val	
			100					105					110			
Gly	Lys	Gly	Gly	Ala	Leu	Glu	Leu	His	Gly	Gln	Lys	Lys	Leu	Ser	Trp	
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Thr	Phe	Leu	Asn	Lys	Thr	Leu	His	Pro	Gly	Gly	Met	Ala	Glu	Gly	Gly	
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Tyr	Phe	Phe	Glu	Arg	Ser	Trp	Gly	His	Arg	Gly	Val	Ile	Val	His	Val	
145					150					155					160	
Ile	Asp	Pro	Lys	Ser	Gly	Thr	Val	Ile	His	Ser	Asp	Arg	Phe	Asp	Thr	
				165					170					175		
Tyr	Arg	Ser	Lys	Lys	Glu	Ser	Glu	Arg	Leu	Val	Gln	Tyr	Leu	Asn	Ala	
			180					185					190			
Val	Pro	Asp	Gly	Arg	Ile	Leu	Ser	Val	Ala	Val	Asn	Asp	Glu	Gly	Ser	
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Arg	Asn	Leu	Asp	Asp	Met	Ala	Arg	Lys	Ala	Met	Thr	Lys	Leu	Gly	Ser	
	210					215					220					
Lys	His	Phe	Leu	His	Leu	Gly	Phe	Arg	His	Pro	Trp	Ser	Phe	Leu	Thr	
225					230					235					240	
Val	Lys	Gly	Asn	Pro	Ser	Ser	Ser	Val	Glu	Asp	His	Ile	Glu	Tyr	His	
				245					250					255		
Gly	His	Arg	Gly	Ser	Ala	Ala	Ala	Arg	Val	Phe	Lys	Leu	Phe	Gln	Thr	
			260					265					270			
Glu	His	Gly	Glu	Tyr	Phe	Asn	Val	Ser	Leu	Ser	Ser	Glu	Trp	Val	Gln	
		275					280					285				
Asp	Val	Glu	Trp	Thr	Glu	Trp	Phe	Asp	His	Asp	Lys	Val	Ser	Gln	Thr	
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Ile	Cys	Asn	Arg	Pro	Ile	Asp	Ile	Gln	Ala	Thr	Thr	Met	Asp	Gly	Val	
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Asn	Leu	Ser	Thr	Glu	Val	Val	Tyr	Lys	Lys	Gly	Gln	Asp	Tyr	Arg	Phe	
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Ala	Cys	Tyr	Asp	Arg	Gly	Arg	Ala	Cys	Arg	Ser	Tyr	Arg	Val	Arg	Phe	
		355					360					365				
Leu	Cys	Gly	Lys	Pro	Val	Arg	Pro	Lys	Leu	Thr	Val	Thr	Ile	Asp	Thr	
	370					375					380					
Asn	Val	Asn	Ser	Thr	Ile	Leu	Asn	Leu	Glu	Asp	Asn	Val	Gln	Ser	Trp	
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Lys	Pro	Gly	Asp	Thr	Leu	Val	Ile	Ala	Ser	Thr	Asp	Tyr	Ser	Met	Tyr	
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Gln	Ala	Glu	Glu	Phe	Gln	Val	Leu	Pro	Cys	Arg	Ser	Cys	Ala	Pro	Asn	
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Gln	Val	Lys	Val	Ala	Gly	Lys	Pro	Met	Tyr	Leu	His	Ile	Gly	Glu	Glu	
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Ile	Asp	Gly	Val	Asp	Met	Arg	Ala	Glu	Val	Gly	Leu	Leu	Ser	Arg	Asn	
	450					455					460					
Ile	Ile	Val	Met	Gly	Glu	Met	Glu	Asp	Lys	Cys	Tyr	Pro	Tyr	Arg	Asn	
465					470				475						480	
His	Ile	Cys	Asn	Phe	Phe	Asp	Phe	Asp	Thr	Phe	Gly	Gly	His	Ile	Lys	
			485					490						495		
Phe	Ala	Leu	Gly	Phe	Lys	Ala	Ala	His	Leu	Glu	Gly	Thr	Glu	Leu	Lys	
			500					505					510			
His	Met	Gly	Gln	Gln	Leu	Val	Gly	Gln	Tyr	Pro	Ile	His	Phe	His	Leu	
		515					520					525				
Ala	Gly	Asp	Val	Asp	Glu	Arg	Gly	Gly	Tyr	Asp	Pro	Pro	Thr	Tyr	Ile	
	530					535					540					
Arg	Asp	Leu	Ser	Ile	His	His	Thr	Phe	Ser	Arg	Cys	Val	Thr	Val	His	
545					550					555					560	
Gly	Ser	Asn	Gly	Leu	Leu	Ile	Lys	Asp	Val	Val	Gly	Tyr	Asn	Ser	Leu	
			565					570					575			
Gly	His	Cys	Phe	Phe	Thr	Glu	Asp	Gly	Pro	Glu	Glu	Arg	Asn	Thr	Phe	
			580					585					590			
Asp	His	Cys	Leu	Gly	Leu	Leu	Val	Lys	Ser	Gly	Thr	Leu	Leu	Pro	Ser	
		595					600					605				
Asp	Arg	Asp	Ser	Lys	Met	Cys	Lys	Met	Ile	Thr	Glu	Asp	Ser	Tyr	Pro	
	610					615					620					
Gly	Tyr	Ile	Pro	Lys	Pro	Arg	Gln	Asp	Cys	Asn	Ala	Val	Ser	Thr	Phe	
625					630					635					640	

Trp	Met	Ala	Asn	Pro	Asn	Asn	Asn	Leu	Ile	Asn	Cys	Ala	Ala	Ala	Gly	
				645					650						655	
Ser	Glu	Glu	Thr	Gly	Phe	Trp	Phe	Ile	Phe	His	His	Val	Pro	Thr	Gly	
			660					665					670			
Pro	Ser	Val	Gly	Met	Tyr	Ser	Pro	Gly	Tyr	Ser	Glu	His	Ile	Pro	Leu	
		675					680					685				
Gly	Lys	Phe	Tyr	Asn	Asn	Arg	Ala	His	Ser	Asn	Tyr	Arg	Ala	Gly	Met	
	690					695					700					
Ile	Ile	Asp	Asn	Gly	Val	Lys	Thr	Thr	Glu	Ala	Ser	Ala	Lys	Asp	Lys	
705					710					715					720	
Arg	Pro	Phe	Leu	Ser	Ile	Ile	Ser	Ala	Arg	Tyr	Ser	Pro	His	Gln	Asp	
			725						730					735		
Ala	Asp	Pro	Leu	Lys	Pro	Arg	Glu	Pro	Ala	Ile	Ile	Arg	His	Phe	Ile	
		740						745					750			
Ala	Tyr	Lys	Asn	Gln	Asp	His	Gly	Ala	Trp	Leu	Arg	Gly	Gly	Asp	Val	
	755						760					765				
Trp	Leu	Asp	Ser	Cys	Arg	Phe	Ala	Asp	Asn	Gly	Ile	Gly	Leu	Thr	Leu	
	770					775					780					
Ala	Ser	Gly	Gly	Thr	Phe	Pro	Tyr	Asp	Asp	Gly	Ser	Lys	Gln	Glu	Ile	
785					790					795					800	
Lys	Asn	Ser	Leu	Phe	Val	Gly	Glu	Ser	Gly	Asn	Val	Gly	Thr	Glu	Met	
			805						810					815		
Met	Asp	Asn	Arg	Ile	Trp	Gly	Pro	Gly	Gly	Leu	Asp	His	Ser	Gly	Arg	
		820						825					830			
Thr	Leu	Pro	Ile	Gly	Gln	Asn	Phe	Pro	Ile	Arg	Gly	Ile	Gln	Leu	Tyr	
	835						840					845				
Asp	Gly	Pro	Ile	Asn	Ile	Gln	Asn	Cys	Thr	Phe	Arg	Lys	Phe	Val	Ala	
	850					855				860						
Leu	Glu	Gly	Arg	His	Thr	Ser	Ala	Leu	Ala	Phe	Arg	Leu	Asn	Asn	Ala	
865					870					875					880	
Trp	Gln	Ser	Cys	Pro	His	Asn	Asn	Val	Thr	Gly	Ile	Ala	Phe	Glu	Asp	
			885					890						895		
Val	Pro	Ile	Thr	Ser	Arg	Val	Phe	Phe	Gly	Glu	Pro	Gly	Pro	Trp	Phe	
		900						905					910			
Asn	Gln	Leu	Asp	Met	Asp	Gly	Asp	Lys	Thr	Ser	Val	Phe	His	Asp	Val	
	915						920					925				
Asp	Gly	Ser	Val	Ser	Glu	Tyr	Pro	Gly	Ser	Tyr	Leu	Thr	Lys	Asn	Asp	
	930					935					940					
Asn	Trp	Leu	Val	Arg	His	Pro	Asp	Cys	Ile	Asn	Val	Pro	Asp	Trp	Arg	
945					950					955					960	

Gly	Ala	Ile	Cys	Ser	Gly	Cys	Tyr	Ala	Gln	Met	Tyr	Ile	Gln	Ala	Tyr	965	970	975
Lys	Thr	Ser	Asn	Leu	Arg	Met	Lys	Ile	Ile	Lys	Asn	Asp	Phe	Pro	Ser	980	985	990
His	Pro	Leu	Tyr	Leu	Glu	Gly	Ala	Leu	Thr	Arg	Ser	Thr	His	Tyr	Gln	995	1000	1005
Gln	Tyr	Gln	Pro	Val	Val	Thr	Leu	Gln	Lys	Gly	Tyr	Thr	Ile	His		1010	1015	1020
Trp	Asp	Gln	Thr	Ala	Pro	Ala	Glu	Leu	Ala	Ile	Trp	Leu	Ile	Asn		1025	1030	1035
Phe	Asn	Lys	Gly	Asp	Trp	Ile	Arg	Val	Gly	Leu	Cys	Tyr	Pro	Arg		1040	1045	1050
Gly	Thr	Thr	Phe	Ser	Ile	Leu	Ser	Asp	Val	His	Asn	Arg	Leu	Leu		1055	1060	1065
Lys	Gln	Thr	Ser	Lys	Thr	Gly	Val	Phe	Val	Arg	Thr	Leu	Gln	Met		1070	1075	1080
Asp	Lys	Val	Glu	Gln	Ser	Tyr	Pro	Gly	Arg	Ser	His	Tyr	Tyr	Trp		1085	1090	1095
Asp	Glu	Asp	Ser	Gly	Leu	Leu	Phe	Leu	Lys	Leu	Lys	Ala	Gln	Asn		1100	1105	1110
Glu	Arg	Glu	Lys	Phe	Ala	Phe	Cys	Ser	Met	Lys	Gly	Cys	Glu	Arg		1115	1120	1125
Ile	Lys	Ile	Lys	Ala	Leu	Ile	Pro	Lys	Asn	Ala	Gly	Val	Ser	Asp		1130	1135	1140
Cys	Thr	Ala	Thr	Ala	Tyr	Pro	Lys	Phe	Thr	Glu	Arg	Ala	Val	Val		1145	1150	1155
Asp	Val	Pro	Met	Pro	Lys	Lys	Leu	Phe	Gly	Ser	Gln	Leu	Lys	Thr		1160	1165	1170
Lys	Asp	His	Phe	Leu	Glu	Val	Lys	Met	Glu	Ser	Ser	Lys	Gln	His		1175	1180	1185
Phe	Phe	His	Leu	Trp	Asn	Asp	Phe	Ala	Tyr	Ile	Glu	Val	Asp	Gly		1190	1195	1200
Lys	Lys	Tyr	Pro	Ser	Ser	Glu	Asp	Gly	Ile	Gln	Val	Val	Val	Ile		1205	1210	1215
Asp	Gly	Asn	Gln	Gly	Arg	Val	Val	Ser	His	Thr	Ser	Phe	Arg	Asn		1220	1225	1230
Ser	Ile	Leu	Gln	Gly	Ile	Pro	Trp	Gln	Leu	Phe	Asn	Tyr	Val	Ala		1235	1240	1245
Thr	Ile	Pro	Asp	Asn	Ser	Ile	Val	Leu	Met	Ala	Ser	Lys	Gly	Arg		1250	1255	1260

Tyr Val Ser Arg Gly Pro Trp Thr Arg Val Leu Glu Lys Leu Gly
1265 1270 1275

Ala Asp Arg Gly Leu Lys Leu Lys Glu Gln Met Ala Phe Val Gly
1280 1285 1290

Phe Lys Gly Ser Phe Arg Pro Ile Trp Val Thr Leu Asp Thr Glu
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Asp His Lys Ala Lys Ile Phe Gln Val Val Pro Ile Pro Val Val
1310 1315 1320

Lys Lys Lys Lys Leu
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Leu Gln Glu Val His Val Ser Lys Glu Thr Ile Gly Lys Ile Ser Ala
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Ala Ser Lys Met Met Trp Cys Ser Ala Ala Val Asp Ile Met Phe Leu
20 25 30

Leu Asp Gly Ser Asn Ser Val Gly Lys Gly Ser Phe Glu Arg Ser Lys
35 40 45

His Phe Ala Ile Thr Val Cys Asp Gly Leu Asp Ile Ser Pro Glu Arg
50 55 60

Val Arg Val Gly Ala Phe Gln Phe Ser Ser Thr Pro His Leu Glu Phe
65 70 75 80

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<213> Homo sapiens

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<213> Homo sapiens

<400> 13

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 65 70 75 80
 Gly Lys Leu Val Ile Lys Asp His Asp Glu Pro Ile Val Leu Arg Thr
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 Arg His Ile Leu Ile Asp Asn Gly Gly Glu Leu His Ala Gly Ser Ala
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 Asp Glu Gly Ile Gln Pro Asp Pro Tyr Tyr Gly Leu Lys Tyr Ile Gly
 130 135 140
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 Gly Tyr Phe Phe Glu Arg Ser Trp Gly His Arg Gly Val Ile Val His
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Ser Lys His Phe Leu His Leu Gly Phe Arg His Pro Trp Ser Phe Leu						
		260		265		270
Thr Val Lys Gly Asn Pro Ser Ser Ser Val Glu Asp His Ile Glu Tyr						
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His Gly His Arg Gly Ser Ala Ala Ala Arg Val Phe Lys Leu Phe Gln						
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Gln Asp Val Glu Trp Thr Glu Trp Phe Asp His Asp Lys Val Ser Gln						
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Thr Lys Gly Gly Glu Lys Ile Ser Asp Leu Trp Lys Ala His Pro Gly						
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Lys Ile Cys Asn Arg Pro Ile Asp Ile Gln Ala Thr Thr Met Asp Gly						
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Val Asn Leu Ser Thr Glu Val Val Tyr Lys Lys Gly Gln Asp Tyr Arg						
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Thr Asn Val Asn Ser Thr Ile Leu Asn Leu Glu Asp Asn Val Gln Ser						
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Lys Phe Ala Leu Gly Phe Lys Ala Ala His Leu Glu Gly Thr Glu Leu						
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Phe	Asp	His	Cys	Leu	Gly	Leu	Leu	Val	Lys	Ser	Gly	Thr	Leu	Leu	Pro
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Pro	Gly	Tyr	Ile	Pro	Lys	Pro	Arg	Gln	Asp	Cys	Asn	Ala	Val	Ser	Thr
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Asp Val Pro Ile Thr Ser Arg Val Phe Phe Gly Glu Pro Gly Pro Trp						
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Tyr Lys Thr Ser Asn Leu Arg Met Lys Ile Ile Lys Asn Asp Phe						
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Pro Ser His Pro Leu Tyr Leu Glu Gly Ala Leu Thr Arg Ser Thr						
	1025		1030			1035
His Tyr Gln Gln Tyr Gln Pro Val Val Thr Leu Gln Lys Gly Tyr						
	1040		1045			1050
Thr Ile His Trp Asp Gln Thr Ala Pro Ala Glu Leu Ala Ile Trp						
	1055		1060			1065
Leu Ile Asn Phe Asn Lys Gly Asp Trp Ile Arg Val Gly Leu Cys						
	1070		1075			1080
Tyr Pro Arg Gly Thr Thr Phe Ser Ile Leu Ser Asp Val His Asn						
	1085		1090			1095
Arg Leu Leu Lys Gln Thr Ser Lys Thr Gly Val Phe Val Arg Thr						
	1100		1105			1110
Leu Gln Met Asp Lys Val Glu Gln Ser Tyr Pro Gly Arg Ser His						
	1115		1120			1125
Tyr Tyr Trp Asp Glu Asp Ser Gly Leu Leu Phe Leu Lys Leu Lys						
	1130		1135			1140
Ala Gln Asn Glu Arg Glu Lys Phe Ala Phe Cys Ser Met Lys Gly						
	1145		1150			1155
Cys Glu Arg Ile Lys Ile Lys Ala Leu Ile Pro Lys Asn Ala Gly						
	1160		1165			1170
Val Ser Asp Cys Thr Ala Thr Ala Tyr Pro Lys Phe Thr Glu Arg						

1175	1180	1185
Ala Val Val Asp Val Pro Met	Pro Lys Lys Leu Phe	Gly Ser Gln
1190	1195	1200
Leu Lys Thr Lys Asp His Phe	Leu Glu Val Lys Met	Glu Ser Ser
1205	1210	1215
Lys Gln His Phe Phe His Leu	Trp Asn Asp Phe Ala	Tyr Ile Glu
1220	1225	1230
Val Asp Gly Lys Lys Tyr Pro	Ser Ser Glu Asp Gly	Ile Gln Val
1235	1240	1245
Val Val Ile Asp Gly Asn Gln	Gly Arg Val Val Ser	His Thr Ser
1250	1255	1260
Phe Arg Asn Ser Ile Leu Gln	Gly Ile Pro Trp Gln	Leu Phe Asn
1265	1270	1275
Tyr Val Ala Thr Ile Pro Asp	Asn Ser Ile Val Leu	Met Ala Ser
1280	1285	1290
Lys Gly Arg Tyr Val Ser Arg	Gly Pro Trp Thr Arg	Val Leu Glu
1295	1300	1305
Lys Leu Gly Ala Asp Arg Gly	Leu Lys Leu Lys Glu	Gln Met Ala
1310	1315	1320
Phe Val Gly Phe Lys Gly Ser	Phe Arg Pro Ile Trp	Val Thr Leu
1325	1330	1335
Asp Thr Glu Asp His Lys Ala	Lys Ile Phe Gln Val	Val Pro Ile
1340	1345	1350
Pro Val Val Lys Lys Lys Lys	Leu	
1355	1360	
<210> 14		
<211> 755		
<212> PRT		
<213> Homo sapiens		
<400> 14		
Met Pro Pro Phe Leu Leu Leu Glu Ala Val Cys Val Phe Leu Phe Ser		
1	5	10 15
Arg Val Pro Pro Ser Leu Pro Leu Gln Glu Val His Val Ser Lys Glu		
	20	25 30
Thr Ile Gly Lys Ile Ser Ala Ala Ser Lys Met Met Trp Cys Ser Ala		
	35	40 45
Ala Val Asp Ile Met Phe Leu Leu Asp Gly Ser Asn Ser Val Gly Lys		
	50	55 60
Gly Ser Phe Glu Arg Ser Lys His Phe Ala Ile Thr Val Cys Asp Gly		
65	70	75 80

Leu	Asp	Ile	Ser	Pro	Glu	Arg	Val	Arg	Val	Gly	Ala	Phe	Gln	Phe	Ser		
				85					90					95			
Ser	Thr	Pro	His	Leu	Glu	Phe	Pro	Leu	Asp	Ser	Phe	Ser	Thr	Gln	Gln		
			100					105					110				
Glu	Val	Lys	Ala	Arg	Ile	Lys	Arg	Met	Val	Phe	Lys	Gly	Gly	Arg	Thr		
		115					120					125					
Glu	Thr	Glu	Leu	Ala	Leu	Lys	Tyr	Leu	Leu	His	Arg	Gly	Leu	Pro	Gly		
	130					135					140						
Gly	Arg	Asn	Ala	Ser	Val	Pro	Gln	Ile	Leu	Ile	Ile	Val	Thr	Asp	Gly		
145					150					155				160			
Lys	Ser	Gln	Gly	Asp	Val	Ala	Leu	Pro	Ser	Lys	Gln	Leu	Lys	Glu	Arg		
				165					170					175			
Gly	Val	Thr	Val	Phe	Ala	Val	Gly	Val	Arg	Phe	Pro	Arg	Trp	Glu	Glu		
			180					185					190				
Leu	His	Ala	Leu	Ala	Ser	Glu	Pro	Arg	Gly	Gln	His	Val	Leu	Leu	Ala		
		195					200					205					
Glu	Gln	Val	Glu	Asp	Ala	Thr	Asn	Gly	Leu	Phe	Ser	Thr	Leu	Ser	Ser		
	210					215					220						
Ser	Ala	Ile	Cys	Ser	Ser	Ala	Thr	Pro	Asp	Cys	Arg	Val	Glu	Ala	His		
225					230					235					240		
Pro	Cys	Glu	His	Arg	Thr	Leu	Glu	Met	Val	Arg	Glu	Phe	Ala	Gly	Asn		
				245					250					255			
Ala	Pro	Cys	Trp	Arg	Gly	Ser	Arg	Arg	Thr	Leu	Ala	Val	Leu	Ala	Ala		
			260					265					270				
His	Cys	Pro	Phe	Tyr	Ser	Trp	Lys	Arg	Val	Phe	Leu	Thr	His	Pro	Ala		
		275					280					285					
Thr	Cys	Tyr	Arg	Thr	Thr	Cys	Pro	Gly	Pro	Cys	Asp	Ser	Gln	Pro	Cys		
	290					295					300						
Gln	Asn	Gly	Gly	Thr	Cys	Val	Pro	Glu	Gly	Leu	Asp	Gly	Tyr	Gln	Cys		
305					310					315					320		
Leu	Cys	Pro	Leu	Ala	Phe	Gly	Gly	Glu	Ala	Asn	Cys	Ala	Leu	Lys	Leu		
				325				330						335			
Ser	Leu	Glu	Cys	Arg	Val	Asp	Leu	Leu	Phe	Leu	Leu	Asp	Ser	Ser	Ala		
			340				345						350				
Gly	Thr	Thr	Leu	Asp	Gly	Phe	Leu	Arg	Ala	Lys	Val	Phe	Val	Lys	Arg		
		355					360					365					
Phe	Val	Arg	Ala	Val	Leu	Ser	Glu	Asp	Ser	Arg	Ala	Arg	Val	Gly	Val		
	370					375					380						
Ala	Thr	Tyr	Ser	Arg	Glu	Leu	Leu	Val	Ala	Val	Pro	Val	Gly	Glu	Tyr		
385					390				395					400			

Gln Asp Val Pro Asp Leu Val Trp Ser Leu Asp Gly Ile Pro Phe Arg
 405 410 415
 Gly Gly Pro Thr Leu Thr Gly Ser Ala Leu Arg Gln Ala Ala Glu Arg
 420 425 430
 Gly Phe Gly Ser Ala Thr Arg Thr Gly Gln Asp Arg Pro Arg Arg Val
 435 440 445
 Val Val Leu Leu Thr Glu Ser His Ser Glu Asp Glu Val Ala Gly Pro
 450 455 460
 Ala Arg His Ala Arg Ala Arg Glu Leu Leu Leu Leu Gly Val Gly Ser
 465 470 475 480
 Glu Ala Val Arg Ala Glu Leu Glu Glu Ile Thr Gly Ser Pro Lys His
 485 490 495
 Val Met Val Tyr Ser Asp Pro Gln Asp Leu Phe Asn Gln Ile Pro Glu
 500 505 510
 Leu Gln Gly Lys Leu Cys Ser Arg Gln Arg Pro Gly Cys Arg Thr Gln
 515 520 525
 Ala Leu Asp Leu Val Phe Met Leu Asp Thr Ser Ala Ser Val Gly Pro
 530 535 540
 Glu Asn Phe Ala Gln Met Gln Ser Phe Val Arg Ser Cys Ala Leu Gln
 545 550 555 560
 Phe Glu Val Asn Pro Asp Val Thr Gln Val Gly Leu Val Val Tyr Gly
 565 570 575
 Ser Gln Val Gln Thr Ala Phe Gly Leu Asp Thr Lys Pro Thr Arg Ala
 580 585 590
 Ala Met Leu Arg Ala Ile Ser Gln Ala Pro Tyr Leu Gly Gly Val Gly
 595 600 605
 Ser Ala Gly Thr Ala Leu Leu His Ile Tyr Asp Lys Val Met Thr Val
 610 615 620
 Gln Arg Gly Ala Arg Pro Gly Val Pro Lys Ala Val Val Val Leu Thr
 625 630 635 640
 Gly Gly Arg Gly Ala Glu Asp Ala Ala Val Pro Ala Gln Lys Leu Arg
 645 650 655
 Asn Asn Gly Ile Ser Val Leu Val Val Gly Val Gly Pro Val Leu Ser
 660 665 670
 Glu Gly Leu Arg Arg Leu Ala Gly Pro Arg Asp Ser Leu Ile His Val
 675 680 685
 Ala Ala Tyr Ala Asp Leu Arg Tyr His Gln Asp Val Leu Ile Glu Trp
 690 695 700
 Leu Cys Gly Glu Ala Lys Gln Pro Val Asn Leu Cys Lys Pro Ser Pro
 705 710 715 720

Cys Met Asn Glu Gly Ser Cys Val Leu Gln Asn Gly Ser Tyr Arg Cys
725 730 735

Lys Cys Arg Asp Gly Trp Glu Gly Pro His Cys Glu Asn Arg Phe Leu
740 745 750

Arg Arg Pro
755

<210> 15
<211> 300
<212> PRT

<213> Homo sapiens

<400> 15

Met Arg Ile Ala Val Ile Cys Phe Cys Leu Leu Gly Ile Thr Cys Ala
1 5 10 15

Ile Pro Val Lys Gln Ala Asp Ser Gly Ser Ser Glu Glu Lys Gln Leu
20 25 30

Tyr Asn Lys Tyr Pro Asp Ala Val Ala Thr Trp Leu Asn Pro Asp Pro
35 40 45

Ser Gln Lys Gln Asn Leu Leu Ala Pro Gln Thr Leu Pro Ser Lys Ser
50 55 60

Asn Glu Ser His Asp His Met Asp Asp Met Asp Asp Glu Asp Asp Asp
65 70 75 80

Asp His Val Asp Ser Gln Asp Ser Ile Asp Ser Asn Asp Ser Asp Asp
85 90 95

Val Asp Asp Thr Asp Asp Ser His Gln Ser Asp Glu Ser His His Ser
100 105 110

Asp Glu Ser Asp Glu Leu Val Thr Asp Phe Pro Thr Asp Leu Pro Ala
115 120 125

Thr Glu Val Phe Thr Pro Val Val Pro Thr Val Asp Thr Tyr Asp Gly
130 135 140

Arg Gly Asp Ser Val Val Tyr Gly Leu Arg Ser Lys Ser Lys Lys Phe
145 150 155 160

Arg Arg Pro Asp Ile Gln Tyr Pro Asp Ala Thr Asp Glu Asp Ile Thr
165 170 175

Ser His Met Glu Ser Glu Glu Leu Asn Gly Ala Tyr Lys Ala Ile Pro
180 185 190

Val Ala Gln Asp Leu Asn Ala Pro Ser Asp Trp Asp Ser Arg Gly Lys
195 200 205

Asp Ser Tyr Glu Thr Ser Gln Leu Asp Asp Gln Ser Ala Glu Thr His
210 215 220

Ser His Lys Gln Ser Arg Leu Tyr Lys Arg Lys Ala Asn Asp Glu Ser
 225 230 235 240
 Asn Glu His Ser Asp Val Ile Asp Ser Gln Glu Leu Ser Lys Val Ser
 245 250 255
 Arg Glu Phe His Ser His Glu Phe His Ser His Glu Asp Met Leu Val
 260 265 270
 Val Asp Pro Lys Ser Lys Glu Glu Asp Lys His Leu Lys Phe Arg Ile
 275 280 285
 Ser His Glu Leu Asp Ser Ala Ser Ser Glu Val Asn
 290 295 300

<210> 16

<211> 829

<212> PRT

<213> Homo sapiens

<400> 16

Met Gly Leu Pro Arg Gly Pro Leu Ala Ser Leu Leu Leu Leu Gln Val
 1 5 10 15
 Cys Trp Leu Gln Cys Ala Ala Ser Glu Pro Cys Arg Ala Val Phe Arg
 20 25 30
 Glu Ala Glu Val Thr Leu Glu Ala Gly Gly Ala Glu Gln Glu Pro Gly
 35 40 45
 Gln Ala Leu Gly Lys Val Phe Met Gly Cys Pro Gly Gln Glu Pro Ala
 50 55 60
 Leu Phe Ser Thr Asp Asn Asp Asp Phe Thr Val Arg Asn Gly Glu Thr
 65 70 75 80
 Val Gln Glu Arg Arg Ser Leu Lys Glu Arg Asn Pro Leu Lys Ile Phe
 85 90 95
 Pro Ser Lys Arg Ile Leu Arg Arg His Lys Arg Asp Trp Val Val Ala
 100 105 110
 Pro Ile Ser Val Pro Glu Asn Gly Lys Gly Pro Phe Pro Gln Arg Leu
 115 120 125
 Asn Gln Leu Lys Ser Asn Lys Asp Arg Asp Thr Lys Ile Phe Tyr Ser
 130 135 140
 Ile Thr Gly Pro Gly Ala Asp Ser Pro Pro Glu Gly Val Phe Ala Val
 145 150 155 160
 Glu Lys Glu Thr Gly Trp Leu Leu Leu Asn Lys Pro Leu Asp Arg Glu
 165 170 175
 Glu Ile Ala Lys Tyr Glu Leu Phe Gly His Ala Val Ser Glu Asn Gly
 180 185 190
 Ala Ser Val Glu Asp Pro Met Asn Ile Ser Ile Ile Val Thr Asp Gln

195		200		205
Asn Asp His Lys Pro Lys Phe Thr Gln Asp Thr Phe Arg Gly Ser Val				
210		215		220
Leu Glu Gly Val Leu Pro Gly Thr Ser Val Met Gln Val Thr Ala Thr				
225		230		235
Asp Glu Asp Asp Ala Ile Tyr Thr Tyr Asn Gly Val Val Ala Tyr Ser				
		245		250
				255
Ile His Ser Gln Glu Pro Lys Asp Pro His Asp Leu Met Phe Thr Ile				
		260		265
				270
His Arg Ser Thr Gly Thr Ile Ser Val Ile Ser Ser Gly Leu Asp Arg				
		275		280
				285
Glu Lys Val Pro Glu Tyr Thr Leu Thr Ile Gln Ala Thr Asp Met Asp				
		290		295
				300
Gly Asp Gly Ser Thr Thr Thr Ala Val Ala Val Val Glu Ile Leu Asp				
		305		310
				315
Ala Asn Asp Asn Ala Pro Met Phe Asp Pro Gln Lys Tyr Glu Ala His				
		325		330
				335
Val Pro Glu Asn Ala Val Gly His Glu Val Gln Arg Leu Thr Val Thr				
		340		345
				350
Asp Leu Asp Ala Pro Asn Ser Pro Ala Trp Arg Ala Thr Tyr Leu Ile				
		355		360
				365
Met Gly Gly Asp Asp Gly Asp His Phe Thr Ile Thr Thr His Pro Glu				
		370		375
				380
Ser Asn Gln Gly Ile Leu Thr Thr Arg Lys Gly Leu Asp Phe Glu Ala				
		385		390
				395
Lys Asn Gln His Thr Leu Tyr Val Glu Val Thr Asn Glu Ala Pro Phe				
		405		410
				415
Val Leu Lys Leu Pro Thr Ser Thr Ala Thr Ile Val Val His Val Glu				
		420		425
				430
Asp Val Asn Glu Ala Pro Val Phe Val Pro Pro Ser Lys Val Val Glu				
		435		440
				445
Val Gln Glu Gly Ile Pro Thr Gly Glu Pro Val Cys Val Tyr Thr Ala				
		450		455
				460
Glu Asp Pro Asp Lys Glu Asn Gln Lys Ile Ser Tyr Arg Ile Leu Arg				
		465		470
				475
Asp Pro Ala Gly Trp Leu Ala Met Asp Pro Asp Ser Gly Gln Val Thr				
		485		490
				495
Ala Val Gly Thr Leu Asp Arg Glu Asp Glu Gln Phe Val Arg Asn Asn				
		500		505
				510
Ile Tyr Glu Val Met Val Leu Ala Met Asp Asn Gly Ser Pro Pro Thr				

515	520	525
Thr Gly Thr Gly Thr Leu Leu Leu Thr Leu Ile Asp Val Asn Asp His		
530	535	540
Gly Pro Val Pro Glu Pro Arg Gln Ile Thr Ile Cys Asn Gln Ser Pro		
545	550	555
Val Arg Gln Val Leu Asn Ile Thr Asp Lys Asp Leu Ser Pro His Thr		
	565	570
Ser Pro Phe Gln Ala Gln Leu Thr Asp Asp Ser Asp Ile Tyr Trp Thr		
	580	585
Ala Glu Val Asn Glu Glu Gly Asp Thr Val Val Leu Ser Leu Lys Lys		
	595	600
Phe Leu Lys Gln Asp Thr Tyr Asp Val His Leu Ser Leu Ser Asp His		
	610	615
Gly Asn Lys Glu Gln Leu Thr Val Ile Arg Ala Thr Val Cys Asp Cys		
	625	630
His Gly His Val Glu Thr Cys Pro Gly Pro Trp Lys Gly Gly Phe Ile		
	645	650
Leu Pro Val Leu Gly Ala Val Leu Ala Leu Leu Phe Leu Leu Leu Val		
	660	665
Leu Leu Leu Leu Val Arg Lys Lys Arg Lys Ile Lys Glu Pro Leu Leu		
	675	680
Leu Pro Glu Asp Asp Thr Arg Asp Asn Val Phe Tyr Tyr Gly Glu Glu		
	690	695
Gly Gly Gly Glu Glu Asp Gln Asp Tyr Asp Ile Thr Gln Leu His Arg		
	705	710
Gly Leu Glu Ala Arg Pro Glu Val Val Leu Arg Asn Asp Val Ala Pro		
	725	730
Thr Ile Ile Pro Thr Pro Met Tyr Arg Pro Arg Pro Ala Asn Pro Asp		
	740	745
Glu Ile Gly Asn Phe Ile Ile Glu Asn Leu Lys Ala Ala Asn Thr Asp		
	755	760
Pro Thr Ala Pro Pro Tyr Asp Thr Leu Leu Val Phe Asp Tyr Glu Gly		
	770	775
Ser Gly Ser Asp Ala Ala Ser Leu Ser Ser Leu Thr Ser Ser Ala Ser		
	785	790
Asp Gln Asp Gln Asp Tyr Asp Tyr Leu Asn Glu Trp Gly Ser Arg Phe		
	805	810
Lys Lys Leu Ala Asp Met Tyr Gly Gly Gly Glu Asp Asp		
	820	825

<210> 17

<211> 694

<212> PRT

<213> Homo sapiens

<400> 17

Met Lys His Leu Lys Arg Trp Trp Ser Ala Gly Gly Gly Leu Leu His
1 5 10 15
Leu Thr Leu Leu Leu Ser Leu Ala Gly Leu Arg Val Asp Leu Asp Leu
20 25 30
Tyr Leu Leu Leu Pro Pro Pro Thr Leu Leu Gln Asp Glu Leu Leu Phe
35 40 45
Leu Gly Gly Pro Ala Ser Ser Ala Tyr Ala Leu Ser Pro Phe Ser Ala
50 55 60
Ser Gly Gly Trp Gly Arg Ala Gly His Leu His Pro Lys Gly Arg Glu
65 70 75 80
Leu Asp Pro Ala Ala Pro Pro Glu Gly Gln Leu Leu Arg Glu Val Arg
85 90 95
Ala Leu Gly Val Pro Phe Val Pro Arg Thr Ser Val Asp Ala Trp Leu
100 105 110
Val His Ser Val Ala Ala Gly Ser Ala Asp Glu Ala His Gly Leu Leu
115 120 125
Gly Ala Ala Ala Ala Ser Ser Thr Gly Gly Ala Gly Ala Ser Val Asp
130 135 140
Gly Gly Ser Gln Ala Val Gln Gly Gly Gly Gly Asp Pro Arg Ala Ala
145 150 155 160
Arg Ser Gly Pro Leu Asp Ala Gly Glu Glu Glu Lys Ala Pro Ala Glu
165 170 175
Pro Thr Ala Gln Val Pro Asp Ala Gly Gly Cys Ala Ser Glu Glu Asn
180 185 190
Gly Val Leu Arg Glu Lys His Glu Ala Val Asp His Ser Ser Gln His
195 200 205
Glu Glu Asn Glu Glu Arg Val Ser Ala Gln Lys Glu Asn Ser Leu Gln
210 215 220
Gln Asn Asp Asp Asp Glu Asn Lys Ile Ala Glu Lys Pro Asp Trp Glu
225 230 235 240
Ala Glu Lys Thr Thr Glu Ser Arg Asn Glu Arg His Leu Asn Gly Thr
245 250 255
Asp Thr Ser Phe Ser Leu Glu Asp Leu Phe Gln Leu Leu Ser Ser Gln
260 265 270
Pro Glu Asn Ser Leu Glu Gly Ile Ser Leu Gly Asp Ile Pro Leu Pro
275 280 285

Gly	Ser	Ile	Ser	Asp	Gly	Met	Asn	Ser	Ser	Ala	His	Tyr	His	Val	Asn	
290						295					300					
Phe	Ser	Gln	Ala	Ile	Ser	Gln	Asp	Val	Asn	Leu	His	Glu	Ala	Ile	Leu	
305					310					315					320	
Leu	Cys	Pro	Asn	Asn	Thr	Phe	Arg	Arg	Asp	Pro	Thr	Ala	Arg	Thr	Ser	
			325						330					335		
Gln	Ser	Gln	Glu	Pro	Phe	Leu	Gln	Leu	Asn	Ser	His	Thr	Thr	Asn	Pro	
			340					345					350			
Glu	Gln	Thr	Leu	Pro	Gly	Thr	Asn	Leu	Thr	Gly	Phe	Leu	Ser	Pro	Val	
		355					360					365				
Asp	Asn	His	Met	Arg	Asn	Leu	Thr	Ser	Gln	Asp	Leu	Leu	Tyr	Asp	Leu	
370						375					380					
Asp	Ile	Asn	Ile	Phe	Asp	Glu	Ile	Asn	Leu	Met	Ser	Leu	Ala	Thr	Glu	
385					390					395					400	
Asp	Asn	Phe	Asp	Pro	Ile	Asp	Val	Ser	Gln	Leu	Phe	Asp	Glu	Pro	Asp	
			405						410					415		
Ser	Asp	Ser	Gly	Leu	Ser	Leu	Asp	Ser	Ser	His	Asn	Asn	Thr	Ser	Val	
			420					425					430			
Ile	Lys	Ser	Asn	Ser	Ser	His	Ser	Val	Cys	Asp	Glu	Gly	Ala	Ile	Gly	
		435					440					445				
Tyr	Cys	Thr	Asp	His	Glu	Ser	Ser	Ser	His	His	Asp	Leu	Glu	Gly	Ala	
450						455					460					
Val	Gly	Gly	Tyr	Tyr	Pro	Glu	Pro	Ser	Lys	Leu	Cys	His	Leu	Asp	Gln	
465					470					475					480	
Ser	Asp	Ser	Asp	Phe	His	Gly	Asp	Leu	Thr	Phe	Gln	His	Val	Phe	His	
				485				490						495		
Asn	His	Thr	Tyr	His	Leu	Gln	Pro	Thr	Ala	Pro	Glu	Ser	Thr	Ser	Glu	
			500					505					510			
Pro	Phe	Pro	Trp	Pro	Gly	Lys	Ser	Gln	Lys	Ile	Arg	Ser	Arg	Tyr	Leu	
		515					520					525				
Glu	Asp	Thr	Asp	Arg	Asn	Leu	Ser	Arg	Asp	Glu	Gln	Arg	Ala	Lys	Ala	
530						535					540					
Leu	His	Ile	Pro	Phe	Ser	Val	Asp	Glu	Ile	Val	Gly	Met	Pro	Val	Asp	
545					550					555					560	
Ser	Phe	Asn	Ser	Met	Leu	Ser	Arg	Tyr	Tyr	Leu	Thr	Asp	Leu	Gln	Val	
				565					570					575		
Ser	Leu	Ile	Arg	Asp	Ile	Arg	Arg	Arg	Gly	Lys	Asn	Lys	Val	Ala	Ala	
			580					585					590			
Gln	Asn	Cys	Arg	Lys	Arg	Lys	Leu	Asp	Ile	Ile	Leu	Asn	Leu	Glu	Asp	
		595					600					605				

Asp Val Cys Asn Leu Gln Ala Lys Lys Glu Thr Leu Lys Arg Glu Gln
 610 615 620
 Ala Gln Cys Asn Lys Ala Ile Asn Ile Met Lys Gln Lys Leu His Asp
 625 630 635 640
 Leu Tyr His Asp Ile Phe Ser Arg Leu Arg Asp Asp Gln Gly Arg Pro
 645 650 655
 Val Asn Pro Asn His Tyr Ala Leu Gln Cys Thr His Asp Gly Ser Ile
 660 665 670
 Leu Ile Val Pro Lys Glu Leu Val Ala Ser Gly His Lys Lys Glu Thr
 675 680 685
 Gln Lys Gly Lys Arg Lys
 690
 <210> 18
 <211> 402
 <212> PRT
 <213> Homo sapiens
 <400> 18
 Met Lys Leu Glu Val Phe Val Pro Arg Ala Ala His Gly Asp Lys Gln
 1 5 10 15
 Gly Ser Asp Leu Glu Gly Ala Gly Gly Ser Asp Ala Pro Ser Pro Leu
 20 25 30
 Ser Ala Ala Gly Asp Asp Ser Leu Gly Ser Asp Gly Asp Cys Ala Ala
 35 40 45
 Lys Pro Ser Ala Gly Gly Gly Ala Arg Asp Thr Gln Gly Asp Gly Glu
 50 55 60
 Gln Ser Ala Gly Gly Gly Pro Gly Ala Glu Glu Ala Ile Pro Ala Ala
 65 70 75 80
 Ala Ala Ala Ala Val Val Ala Glu Gly Ala Glu Ala Gly Ala Ala Gly
 85 90 95
 Pro Gly Ala Gly Gly Ala Gly Ser Gly Glu Gly Ala Arg Ser Lys Pro
 100 105 110
 Tyr Thr Arg Arg Pro Lys Pro Pro Tyr Ser Tyr Ile Ala Leu Ile Ala
 115 120 125
 Met Ala Ile Arg Asp Ser Ala Gly Gly Arg Leu Thr Leu Ala Glu Ile
 130 135 140
 Asn Glu Tyr Leu Met Gly Lys Phe Pro Phe Phe Arg Gly Ser Tyr Thr
 145 150 155 160
 Gly Trp Arg Asn Ser Val Arg His Asn Leu Ser Leu Asn Asp Cys Phe
 165 170 175

Val Lys Val Leu Arg Asp Pro Ser Arg Pro Trp Gly Lys Asp Asn Tyr
 180 185 190
 Trp Met Leu Asn Pro Asn Ser Glu Tyr Thr Phe Ala Asp Gly Val Phe
 195 200 205
 Arg Arg Arg Arg Lys Arg Leu Ser His Arg Ala Pro Val Pro Ala Pro
 210 215 220
 Gly Leu Arg Pro Glu Glu Ala Pro Gly Leu Pro Ala Ala Pro Pro Pro
 225 230 235 240
 Ala Pro Ala Ala Pro Ala Ser Pro Arg Met Arg Ser Pro Ala Arg Gln
 245 250 255
 Glu Glu Arg Ala Ser Pro Ala Gly Lys Phe Ser Ser Ser Phe Ala Ile
 260 265 270
 Asp Ser Ile Leu Arg Lys Pro Phe Arg Ser Arg Arg Leu Arg Asp Thr
 275 280 285
 Ala Pro Gly Thr Thr Leu Gln Trp Gly Ala Ala Pro Cys Pro Pro Leu
 290 295 300
 Pro Ala Phe Pro Ala Leu Leu Pro Ala Ala Pro Cys Arg Ala Leu Leu
 305 310 315 320
 Pro Leu Cys Ala Tyr Gly Ala Gly Glu Pro Ala Arg Leu Gly Ala Arg
 325 330 335
 Glu Ala Glu Val Pro Pro Thr Ala Pro Pro Leu Leu Leu Ala Pro Leu
 340 345 350
 Pro Ala Ala Ala Pro Ala Lys Pro Leu Arg Gly Pro Ala Ala Gly Gly
 355 360 365
 Ala His Leu Tyr Cys Pro Leu Arg Leu Pro Ala Ala Leu Gln Ala Ala
 370 375 380
 Leu Val Arg Arg Pro Gly Pro His Leu Ser Tyr Pro Val Glu Thr Leu
 385 390 395 400

Leu Ala

<210> 19
 <211> 209
 <212> PRT
 <213> Homo sapiens

<400> 19

Met Glu Lys His His Val Pro Ser Asp Phe Asn Val Asn Val Lys Val
 1 5 10 15
 Asp Thr Gly Pro Arg Glu Asp Leu Ile Lys Val Leu Glu Asp Met Arg
 20 25 30
 Gln Glu Tyr Glu Leu Ile Ile Lys Lys Lys His Arg Asp Leu Asp Thr
 35 40 45

Trp Tyr Lys Glu Gln Ser Ala Ala Met Ser Gln Glu Ala Ala Ser Pro
 50 55 60
 Ala Thr Val Gln Ser Arg Gln Gly Asp Ile His Glu Leu Lys Arg Thr
 65 70 75 80
 Phe Gln Ala Leu Glu Ile Asp Leu Gln Ala Gln Tyr Ser Thr Lys Ser
 85 90 95
 Ala Leu Glu Asn Met Leu Ser Glu Thr Gln Ser Arg Tyr Ser Cys Lys
 100 105 110
 Leu Gln Asp Met Gln Glu Ile Ile Ser His Tyr Glu Glu Glu Leu Thr
 115 120 125
 Gln Leu Arg His Glu Leu Glu Arg Gln Asn Asn Glu Tyr Gln Val Leu
 130 135 140
 Leu Gly Ile Lys Thr His Leu Glu Lys Glu Ile Thr Thr Tyr Arg Arg
 145 150 155 160
 Leu Leu Glu Gly Glu Ser Glu Gly Thr Arg Glu Glu Ser Lys Ser Ser
 165 170 175
 Met Lys Val Ser Ala Thr Pro Lys Ile Lys Ala Ile Thr Gln Glu Thr
 180 185 190
 Ile Asn Gly Arg Leu Val Leu Cys Gln Val Asn Glu Ile Gln Lys His
 195 200 205

Ala

<210> 20
 <211> 278
 <212> PRT
 <213> Homo sapiens
 <400> 20

Met Asp Lys Ser Gly Ile Asp Ser Leu Asp His Val Thr Ser Asp Ala
 1 5 10 15
 Val Glu Leu Ala Asn Arg Ser Asp Asn Ser Ser Asp Ser Ser Leu Phe
 20 25 30
 Lys Thr Gln Cys Ile Pro Tyr Ser Pro Lys Gly Glu Lys Arg Asn Pro
 35 40 45
 Ile Arg Lys Phe Val Arg Thr Pro Glu Ser Val His Ala Ser Asp Ser
 50 55 60
 Ser Ser Asp Ser Ser Phe Glu Pro Ile Pro Leu Thr Ile Lys Ala Ile
 65 70 75 80
 Phe Glu Arg Phe Lys Asn Arg Lys Lys Arg Tyr Lys Lys Lys Lys Lys
 85 90 95
 Arg Arg Tyr Gln Pro Thr Gly Arg Pro Arg Gly Arg Pro Glu Gly Arg
 100 105 110

Arg Asn Pro Ile Tyr Ser Leu Ile Asp Lys Lys Lys Gln Phe Arg Ser
 115 120 125
 Arg Gly Ser Gly Phe Pro Phe Leu Glu Ser Glu Asn Glu Lys Asn Ala
 130 135 140
 Pro Trp Arg Lys Ile Leu Thr Phe Glu Gln Ala Val Ala Arg Gly Phe
 145 150 155 160
 Phe Asn Tyr Ile Glu Lys Leu Lys Tyr Glu His His Leu Lys Glu Ser
 165 170 175
 Leu Lys Gln Met Asn Val Gly Glu Asp Leu Glu Asn Glu Asp Phe Asp
 180 185 190
 Ser Arg Arg Tyr Lys Phe Leu Asp Asp Asp Gly Ser Ile Ser Pro Ile
 195 200 205
 Glu Glu Ser Thr Ala Glu Asp Glu Asp Ala Thr His Leu Glu Asp Asn
 210 215 220
 Glu Cys Asp Ile Lys Leu Ala Gly Asp Ser Phe Ile Val Ser Ser Glu
 225 230 235 240
 Phe Pro Val Arg Leu Ser Val Tyr Leu Glu Glu Glu Asp Ile Thr Glu
 245 250 255
 Glu Ala Ala Leu Ser Lys Lys Arg Ala Thr Lys Ala Lys Asn Thr Gly
 260 265 270
 Gln Arg Gly Leu Lys Met
 275

<210> 21
 <211> 488
 <212> PRT
 <213> C-TERMINAL PORTION OF ColoUp2

<400> 21

Ala Val Leu Ala Ala His Cys Pro Phe Tyr Ser Trp Lys Arg Val Phe
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 Leu Thr His Pro Ala Thr Cys Tyr Arg Thr Thr Cys Pro Gly Pro Cys
 20 25 30
 Asp Ser Gln Pro Cys Gln Asn Gly Gly Thr Cys Val Pro Glu Gly Leu
 35 40 45
 Asp Gly Tyr Gln Cys Leu Cys Pro Leu Ala Phe Gly Gly Glu Ala Asn
 50 55 60
 Cys Ala Leu Lys Leu Ser Leu Glu Cys Arg Val Asp Leu Leu Phe Leu
 65 70 75 80

Leu Asp Ser Ser Ala Gly Thr Thr Leu Asp Gly Phe Leu Arg Ala Asp
 85 90 95

Val Phe Val Lys Arg Phe Val Arg Ala Val Leu Ser Glu Asp Ser Arg
 100 105 110

Ala Arg Val Gly Val Ala Thr Tyr Ser Arg Glu Leu Leu Val Ala Val
 115 120 125

Pro Val Gly Glu Tyr Gln Asp Val Pro Asp Leu Val Trp Ser Leu Asp
 130 135 140

Gly Ile Pro Phe Arg Gly Gly Pro Thr Leu Thr Gly Ser Ala Leu Arg
 145 150 155 160

Gln Ala Ala Glu Arg Gly Phe Gly Ser Ala Thr Arg Thr Gly Gln Asp
 165 170 175

Arg Pro Arg Arg Val Val Val Leu Leu Thr Glu Ser His Ser Glu Asp
 180 185 190

Glu Val Ala Gly Pro Ala Arg His Ala Arg Ala Arg Glu Leu Leu Leu
 195 200 205

Leu Gly Val Gly Ser Glu Ala Val Arg Ala Glu Leu Glu Glu Ile Thr
 210 215 220

Gly Ser Pro Lys His Val Met Val Tyr Ser Asp Pro Gln Asp Leu Phe
 225 230 235 240

Asn Gln Ile Pro Glu Leu Gln Gly Lys Leu Cys Ser Arg Gln Arg Pro
 245 250 255

Gly Cys Arg Thr Gln Ala Leu Asp Leu Val Phe Met Leu Asp Thr Ser
 260 265 270

Ala Ser Val Gly Pro Glu Asn Phe Ala Gln Met Gln Ser Phe Val Arg
 275 280 285

Ser Cys Ala Leu Gln Phe Glu Val Asn Pro Asp Val Thr Gln Val Gly
 290 295 300

Leu Val Val Tyr Gly Ser Gln Val Gln Thr Ala Phe Gly Leu Asp Thr
 305 310 315 320

Lys Pro Thr Arg Ala Ala Met Leu Arg Ala Ile Ser Gln Ala Pro Tyr
325 330 335

Leu Gly Gly Val Gly Ser Ala Gly Thr Ala Leu Leu His Ile Tyr Asp
340 345 350

Lys Val Met Thr Val Gln Arg Gly Ala Arg Pro Gly Val Pro Lys Ala
355 360 365

Val Val Val Leu Thr Gly Gly Arg Gly Ala Glu Asp Ala Ala Val Pro
370 375 380

Ala Gln Lys Leu Arg Asn Asn Gly Ile Ser Val Leu Val Val Gly Val
385 390 395 400

Gly Pro Val Leu Ser Glu Gly Leu Arg Arg Leu Ala Gly Pro Arg Asp
405 410 415

Ser Leu Ile His Val Ala Ala Tyr Ala Asp Leu Arg Tyr His Gln Asp
420 425 430

Val Leu Ile Glu Trp Leu Cys Gly Glu Ala Lys Gln Pro Val Asn Leu
435 440 445

Cys Lys Pro Ser Pro Cys Met Asn Glu Gly Ser Cys Val Leu Gln Asn
450 455 460

Gly Ser Tyr Arg Cys Lys Cys Arg Asp Gly Trp Glu Gly Pro His Cys
465 470 475 480

Glu Asn Arg Phe Leu Arg Arg Pro
485

<210> 22
<211> 403
<212> PRT
<213> HUMAN FOXQ1

<400> 22

Met Lys Leu Glu Val Phe Val Pro Arg Ala Ala His Gly Asp Lys Gln
1 5 10 15

Gly Ser Asp Leu Glu Gly Ala Gly Gly Ser Asp Ala Pro Ser Pro Leu
20 25 30

Ser Ala Ala Gly Asp Asp Ser Leu Gly Ser Asp Gly Asp Cys Ala Ala
 35 40 45

Asn Ser Pro Ala Ala Gly Gly Gly Ala Arg Asp Pro Pro Gly Asp Gly
 50 55 60

Glu Gln Ser Ala Gly Gly Gly Pro Gly Ala Glu Glu Ala Ile Pro Ala
 65 70 75 80

Ala Ala Ala Ala Ala Val Val Ala Glu Gly Ala Glu Ala Gly Ala Ala
 85 90 95

Gly Pro Gly Ala Gly Gly Ala Gly Ser Gly Glu Gly Ala Arg Ser Lys
 100 105 110

Pro Tyr Thr Arg Arg Pro Lys Pro Pro Tyr Ser Tyr Ile Ala Leu Ile
 115 120 125

Ala Met Ala Ile Arg Asp Ser Ala Gly Gly Arg Leu Thr Leu Ala Glu
 130 135 140

Ile Asn Glu Tyr Leu Met Gly Lys Phe Pro Phe Phe Arg Gly Ser Tyr
 145 150 155 160

Thr Gly Trp Arg Asn Ser Val Arg His Asn Leu Ser Leu Asn Asp Cys
 165 170 175

Phe Val Lys Val Leu Arg Asp Pro Ser Arg Pro Trp Gly Lys Asp Asn
 180 185 190

Tyr Trp Met Leu Asn Pro Asn Ser Glu Tyr Thr Phe Ala Asp Gly Val
 195 200 205

Phe Arg Arg Arg Arg Lys Arg Leu Ser His Arg Ala Pro Val Pro Ala
 210 215 220

Pro Gly Leu Arg Pro Glu Glu Ala Pro Gly Leu Pro Ala Ala Pro Pro
 225 230 235 240

Pro Ala Pro Ala Ala Pro Ala Ser Pro Arg Met Arg Ser Pro Ala Arg
 245 250 255

Gln Glu Glu Arg Ala Ser Pro Ala Gly Lys Phe Ser Ser Ser Phe Ala
 260 265 270

Ile Asp Ser Ile Leu Arg Lys Pro Phe Arg Ser Arg Arg Leu Arg Asp
275 280 285

Thr Ala Pro Gly Thr Thr Leu Gln Trp Gly Ala Ala Pro Cys Pro Pro
290 295 300

Leu Pro Ala Phe Pro Ala Leu Leu Pro Ala Ala Pro Cys Arg Ala Leu
305 310 315 320

Leu Pro Leu Cys Ala Tyr Gly Ala Gly Glu Pro Ala Arg Leu Gly Ala
325 330 335

Arg Glu Ala Glu Val Pro Pro Thr Ala Pro Pro Leu Leu Leu Ala Pro
340 345 350

Leu Pro Ala Ala Ala Pro Ala Lys Pro Leu Arg Gly Pro Ala Ala Gly
355 360 365

Gly Ala His Leu Tyr Cys Pro Leu Arg Leu Pro Ala Ala Leu Gln Ala
370 375 380

Ala Ser Val Arg Arg Pro Gly Pro His Leu Pro Tyr Pro Val Glu Thr
385 390 395 400

Leu Leu Ala

<210> 23
<211> 400
<212> PRT
<213> MOUSE FOXQ1

<400> 23

Met Lys Leu Glu Val Phe Val Pro Arg Ala Ala His Gly Asp Lys Met
1 5 10 15

Gly Ser Asp Leu Glu Gly Ala Gly Ser Ser Asp Val Pro Ser Pro Leu
20 25 30

Ser Ala Ala Gly Asp Asp Ser Leu Gly Ser Asp Gly Asp Cys Ala Ala
35 40 45

Asn Ser Pro Ala Ala Gly Ser Gly Ala Gly Asp Leu Glu Gly Gly Gly
50 55 60

Gly Glu Arg Asn Ser Ser Gly Gly Pro Ser Ala Gln Asp Gly Pro Glu
65 70 75 80

Ala Thr Asp Asp Ser Arg Thr Gln Ala Ser Ala Ala Gly Pro Cys Ala
 85 90 95

Gly Gly Val Gly Gly Gly Glu Gly Ala Arg Ser Lys Pro Tyr Thr Arg
 100 105 110

Arg Pro Lys Pro Pro Tyr Ser Tyr Ile Ala Leu Ile Ala Met Ala Ile
 115 120 125

Arg Asp Ser Ala Gly Gly Arg Leu Thr Leu Ala Glu Ile Asn Glu Tyr
 130 135 140

Leu Met Gly Lys Phe Pro Phe Phe Arg Gly Ser Tyr Thr Gly Trp Arg
 145 150 155 160

Asn Ser Val Arg His Asn Leu Ser Leu Asn Asp Cys Phe Val Lys Val
 165 170 175

Leu Arg Asp Pro Ser Arg Pro Trp Gly Lys Asp Asn Tyr Trp Met Leu
 180 185 190

Asn Pro Asn Ser Glu Tyr Thr Phe Ala Asp Gly Val Phe Arg Arg Arg
 195 200 205

Arg Lys Arg Leu Ser His Arg Thr Thr Val Ser Ala Ser Gly Leu Arg
 210 215 220

Pro Glu Glu Ala Pro Pro Gly Pro Ala Gly Thr Pro Gln Pro Ala Pro
 225 230 235 240

Ala Ala Arg Ser Ser Pro Ile Ala Arg Ser Pro Ala Arg Gln Glu Glu
 245 250 255

Arg Ser Ser Pro Ala Ser Lys Phe Ser Ser Ser Phe Ala Ile Asp Ser
 260 265 270

Ile Leu Ser Lys Pro Phe Arg Ser Arg Arg Asp Gly Asp Ser Ala Leu
 275 280 285

Gly Val Gln Leu Pro Trp Gly Ala Ala Pro Cys Pro Pro Leu Arg Ala
 290 295 300

Tyr Pro Ala Leu Leu Pro Ala Ala Pro Gly Gly Ala Leu Leu Pro Leu
 305 310 315 320

Cys Ala Tyr Gly Ala Ser Glu Pro Thr Leu Leu Ala Ser Arg Gly Thr
325 330 335

Glu Val Gln Pro Ala Ala Pro Leu Leu Leu Ala Pro Leu Ser Thr Ala
340 345 350

Ala Pro Ala Lys Pro Phe Arg Gly Pro Glu Thr Ala Gly Ala Ala His
355 360 365

Leu Tyr Cys Pro Leu Arg Leu Pro Thr Ala Leu Gln Ala Ala Ala Ala
370 375 380

Cys Gly Pro Gly Pro His Leu Ser Tyr Pro Val Glu Thr Leu Leu Ala
385 390 395 400

<210> 24
<211> 400
<212> PRT
<213> RAT FOX Q1

<400> 24

Met Lys Leu Glu Val Phe Ala Pro Arg Ala Ala His Gly Asp Lys Met
1 5 10 15

Gly Ser Asp Leu Glu Gly Ala Gly Ser Ser Asp Val Pro Ser Pro Leu
20 25 30

Ser Ala Ala Gly Asp Asp Ser Leu Gly Ser Asp Gly Asp Cys Ala Ala
35 40 45

Asn Ser Pro Ala Ala Gly Arg Gly Ala Val Asp Leu Glu Gly Gly Gly
50 55 60

Gly Glu Arg Asn Ser Ser Gly Gly Ala Ser Thr Gln Asp Asp Pro Glu
65 70 75 80

Val Thr Asp Gly Ser Arg Thr Gln Ala Ser Pro Val Gly Pro Cys Ala
85 90 95

Gly Ser Val Gly Gly Gly Glu Gly Ala Arg Ser Lys Pro Tyr Thr Arg
100 105 110

Arg Pro Lys Pro Pro Tyr Ser Tyr Ile Ala Leu Ile Ala Met Ala Ile
115 120 125

Arg Asp Ser Ala Gly Gly Arg Leu Thr Leu Ala Glu Ile Asn Glu Tyr
130 135 140

Leu Met Gly Lys Phe Pro Phe Phe Arg Gly Ser Tyr Thr Gly Trp Arg
145 150 155 160

Asn Ser Val Arg His Asn Leu Ser Leu Asn Asp Cys Phe Val Lys Val
165 170 175

Leu Arg Asp Pro Ser Arg Pro Trp Gly Lys Asp Asn Tyr Trp Met Leu
180 185 190

Asn Pro Asn Ser Glu Tyr Thr Phe Ala Asp Gly Val Phe Arg Arg Arg
195 200 205

Arg Lys Arg Leu Ser His Arg Thr Thr Val Ser Ala Ser Gly Leu Arg
210 215 220

Pro Glu Glu Ala Pro Pro Gly Pro Ala Gly Thr Pro Gln Pro Ala Pro
225 230 235 240

Thr Ala Gly Ser Ser Pro Ile Ala Arg Ser Pro Ala Arg Gln Glu Glu
245 250 255

Gly Ser Ser Pro Ala Ser Lys Phe Ser Ser Ser Phe Ala Ile Asp Ser
260 265 270

Ile Leu Ser Lys Pro Phe Arg Ser Arg Arg Asp Gly Asp Pro Ala Leu
275 280 285

Gly Val Gln Leu Pro Trp Ser Ala Ala Pro Cys Pro Pro Leu Arg Ala
290 295 300

Tyr Pro Ala Leu Leu Pro Ala Ser Ser Gly Gly Ala Leu Leu Pro Leu
305 310 315 320

Cys Ala Tyr Gly Ala Gly Glu Pro Thr Leu Leu Ala Ser Arg Gly Ala
325 330 335

Glu Val Gln Pro Ala Ala Pro Leu Leu Leu Ala Pro Leu Ser Thr Ala
340 345 350

Ala Pro Ala Lys Pro Phe Arg Gly Pro Glu Thr Ala Gly Ala Ala His
355 360 365

Leu Tyr Cys Pro Leu Arg Leu Pro Thr Ala Leu Gln Ala Ala Ala Ala
 370 375 380

Cys Gly Pro Gly Pro His Leu Ser Tyr Arg Val Glu Thr Leu Leu Ala
 385 390 395 400

<210> 25
 <211> 1212
 <212> DNA
 <213> HUMAN FOXQ1

<400> 25
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 gagggcgcgg gcggcagcga cgcgccgtcc ccgctgtcgg cggcgggaga cgactccctg 120
 ggctcagatg gggactgcgc ggccaacagc ccggccgcgg gcggcggcgc cagagatccg 180
 ccgggcgacg gcgaacagag tgcgggaggg gggccggggc cggaggaggc gatcccggca 240
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 ggcgggcgcg ggagcggcga ggggtgcacg agcaagccat atacgcggcg gcccaagccc 360
 ccctactcgt acatcgcgct catcgccatg gccatccgcg actcggcggg cgggcgcttg 420
 acgctggcgg agatcaacga gtacctcatg ggcaagttcc cttttttccg cggcagctac 480
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 ctgcgcgacc cctcgcggcc ctggggcaag gacaactact ggatgctcaa cccaacagc 600
 gagtacacct tcgccgacgg ggtcttccgc cgccgccgca agcgcctcag ccaccgcgcg 660
 ccggtccccc cgcccgggct gcggcccag gagggcccgg gcctccccgc cgcccgcgcg 720
 cccgcgccc cgcccgggc ctcgccccgc atgcgctcgc ccgcccgcca ggaggagcgc 780
 gccagcccc cgggcaagtt ctccagctcc ttgcctatcg acagcatcct gcgcaagccc 840
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 ccctgcccc gcgtgcccc gttccccgcg ctctctcccc cggcgccctg cagggccctg 960
 ctgccgtct gcgcgtacgg cgcgggcgag ccggcgcggc tgggcgcgcg cgaggccgag 1020
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 ccaactccgag gcccgggcgg cggcgggcgc cacctgtact gccccctgcg gctgcccgcg 1140
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 ctctagcct ga 1212

<210> 26
 <211> 1203
 <212> DNA

<213> MOUSE FOXQ1

<400> 26

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gaggggggccc gcagcagcga cgtgccatct ccactgtccg cggctgggtga cgactcctta      120
ggctcagacg gggactgtgc agccaacagc ccggcggcgcg gcagcggcgcg cggggatctg      180
gaagggtggcg gcggcgagag gaattcgagt ggcgggccga gcgccaaga cgggccggag      240
gcaactgatg acagcagaac gcaggcctcc gcggcagggc cgtgcgcggg cggcgtgggc      300
ggcggcgagg gcgcgcgag caagccgtac acgcggcggc ccaagcccc atactcctac      360
atcgctctca tcgccatggc catccgcgac tccgcgggcg gacgcctgac actggccgag      420
atcaacgagt acctcatggg caagttcccc tttttccggg gcagctacac gggctggcgcg      480
aactccgtgc gccacaacct ctcgctcaac gactgtttcg tcaagggtgct gcgcgacccc      540
tcgcgggccct ggggcaagga caactactgg atgctcaacc ccaacagcga atacaccttc      600
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gccgcccgcg cctccccgat cgcgcgctcg ccggctcgcc aggaggagcg ctccagccct      780
gcgagcaagt tctccagctc cttcgccatc gacagcattc tcagcaagcc ttttcgcagc      840
cgccgcgacg gcgactcggc tctgggggtg cagctaccct ggggcgcgcg tccctgcccg      900
ccgctgcgcg cctatcccgc gctccttccc gcggcgcccg gtggcgctct gctaccgctc      960
tgtgcttacg gcgcaagcga gcctacgctg ctggcgctcg gcgggaccga ggtgcagccc     1020
gcggcgcccc ttctgctggc gcccctctcc accgcggctc cagccaagcc attccgaggt     1080
ccggagaccg ccggcgcggc gcacctgtac tgccccctac ggctgcccac ggccctgcag     1140
gcggcagcgg cctgcgggtc cggtcgcgac ctgtcctacc cggtgagagac tctgctagct     1200
tga                                                                    1203
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<210> 27

<211> 1203

<212> DNA

<213> RAT FOXQ1

<400> 27

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gaggggggccc gcagcagcga cgtgccatct ccgctgtccg cggctggcga cgactcctta      120
ggctctgacg gggactgtgc agccaacagc ccggcggcgcg gcagagggcg cgtggatctg      180
gaaggcgggcg gcggcgagag gaattcgagt ggcgggggcg gcacccaaga cgatcccagag      240
gtgaccgatg gcagcagaac gcaggcctcc ccggtggggc cgtgcgcggg cagcgtgggc      300
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ggcgggtgagg ggcgcgcgag caagccgtac acgcggcggc ccaagccccc ctactcctac	360
atcgcaactca tcgccatggc catccgcgac tccgcgggcg gacgcctgac gctggccgag	420
atcaacgagt acctcatggg caagttcccc tttttccggg gcagctacac gggctggcgc	480
aactccgtgc gccacaacct ctgcgtcaac gactgtttcg tcaagggtgct gcgcgacccc	540
tcgcggccct ggggcaagga caattactgg atgctcaacc ccaacagcga atacaccttc	600
gccgacgggg tcttcgcgcg ccgcgcgaag cgctcagcc accggaccac agtctccgca	660
tcggggctac ggccggagga agccccaccc ggacctgcgg ggaccccgca gcccgcgccc	720
accgccggct cctccccaat cgcgcgctcg cccgctcgcc aggaggaggg ctccagcccc	780
gcgagcaagt tctccagctc cttcgccatc gacagcatcc tcagcaagcc gtttcgcagc	840
cgccgcgacg gcgacccggc tctgggggtg cagctaccct ggagcgctgc tccctgcccc	900
ccgtgcgcg cctatccgc gctccttccc gcgtcgtccg gcggtgccct gctgccgctc	960
tgtgcttacg gcgcgggcga gccacgctg ctggcgctgc gcggggccga ggtgcagccc	1020
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ccggagaccg ccggcgcggc gcacctgtac tgccccctac ggctgcccac ggccctgcag	1140
gcggccgcgg cctgcggtcc gggtcgcac ctgtcctaacc gggaggagac gctgctagct	1200
tga	1203